Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte MING-SYAN CHEN, DILIP D. KANDLUR and PHILIP SHI-LUNG YU

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Appeal No. 1998-2579
Application 08/350,195

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ON BRIEF

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Before THOMAS, JERRY SMITH, and BLANKENSHIP, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 1, 4, 7, 8 and 10. Claims 2, 3, 5, 6 and 9 have been cancelled. Claims 11 and 12 have been indicated by the examiner to contain allowable

subject matter. An amendment after final rejection was filed on March 6, 1997 but was denied entry by the examiner.

The disclosed invention pertains to a method and apparatus for storing video data having a plurality of resolution classes in a disk-array-based video server. More particularly, the invention uses a rate staggering technique to store the different resolution data into different disks in the disk array so as to minimize the buffer space required by the server.

Representative claim 1 is reproduced as follows:

1. A method of storing video data having a plurality of resolution classes in a disk-array-based video server, comprising the steps of:

dividing a video bit stream into a plurality of substreams such that subsets of said substreams can be decoded to create a plurality of output videos of different resolution classes;

storing each of said substreams in a disk array comprising a plurality of disk storage devices in a striped format, wherein blocks for each resolution are stored in a staggered pattern across said disk storage devices in said array;

receiving, by the said video server, a request from a client for a certain class of video;

identifying, according to a resolution class of video requested, a subset of video substreams;

retrieving from said disk-array and transmitting to said client said identified subset of video streams so as to minimize buffer space required by said server for storage of video data; and

wherein rate staggering is employed to store data corresponding to different data rates of a video clip into different disks in said disk array.

The examiner relies on the following references:

Birk 5,510,905 Apr. 23, 1996
(filed Sep. 28, 1993)

P. Lougher et al. (Lougher), "Scalable Storage Servers For Digital Audio and Video," Storage and Recording Systems, 5-7 April 1994, Conference Publication No. 402, pages 140-143.

Claims 1, 4, 7, 8 and 10 stand rejected under 35 U.S.C. § 103. As evidence of obviousness the examiner offers Lougher in view of Birk.

Rather than repeat the arguments of appellants or the examiner, we make reference to the briefs and the answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejection advanced by the examiner and the evidence of obviousness relied upon by the examiner as support

for the rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellants' arguments set forth in the briefs along with the examiner's rationale in support of the rejection and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in claims 1, 4, 7, 8 and 10. Accordingly, we reverse.

Appellants have indicated that for purposes of this appeal the claims will all stand or fall together as a single group [brief, page 4]. Consistent with this indication appellants have made no separate arguments with respect to any of the claims on appeal. Accordingly, all the claims before us will stand or fall together. Note In re King, 801 F.2d 1324, 1325, 231 USPQ 136, 137 (Fed. Cir. 1986); In re Sernaker, 702 F.2d 989, 991, 217 USPQ 1, 3 (Fed. Cir. 1983).

In rejecting claims under 35 U.S.C. § 103, it is

incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re

Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). Only those arguments actually made by appellants have been considered in this decision. Arguments which appellants could have made but chose not to make in the brief have not been considered [see 37 CFR
§ 1.192(a)].

The examiner indicates that Lougher discloses each of the features of independent claims 1, 4 and 7 except for the limitations related to the rate staggering controller for storing data in the disk array using a rate staggering technique [answer, pages 3-6]. The examiner cites Birk as teaching a controller for storing video data of different data

rates in a disk array using Zone Bit Recording. The examiner views the Zone Bit Recording of Birk as the same thing as the claimed rate staggering. The examiner concludes that it would have been obvious to the artisan to store the Lougher data as taught by Birk [id., pages 6-7].

Appellants argue that the Zone Bit Recording technique of Birk does not teach or suggest the rate staggering technique of the claimed invention. Appellants also argue that there is no suggestion or motivation for combining the teachings of Lougher and Birk [brief, page 5]. The examiner responds that the claimed rate staggering technique reads on the conventional Zone Bit Recording technique of Birk [answer, pages 8-9]. Appellants respond that the examiner has ignored specific features of the claimed invention [reply brief].

We agree with appellants that the examiner has failed to consider the specific language of the claims. The examiner's position fundamentally relies on his finding that the Zoned Bit Recording of Birk is the same as the claimed rate staggering technique. Appellants' application uses the term rate staggering in a very specific way, and we find that

the term rate staggering as used in the appealed claims must be interpreted in a manner which is consistent with the disclosed invention. Rate staggering as used in the specification refers to the ordering of blocks of data in a disk storage array using calculations to minimize the amount of buffer storage required by the server [specification, pages 3-5 and page 8]. Note that claims 1, 4 and 7 all recite that the rate staggering minimizes the buffer space required by the server or optimizes system bandwidth. We agree with appellants that Birk has nothing to do with rate staggering to optimize system bandwidth as disclosed and claimed in this application.

Since the examiner has not found any prior art which teaches rate staggering as disclosed and claimed by appellants, the examiner has failed to establish a prima facie case of obviousness. Therefore, the decision of the examiner rejecting claims 1, 4, 7, 8 and 10 is reversed.

REVERSED

JAMES D. THOMAS Administrative Patent Judge	)	
JERRY SMITH Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
HOWARD B. BLANKENSHIP Administrative Patent Judge	)	

JS:pgg
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